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PENDING CLAIMS

1-20. (Cancelled)

21. (Currently amended) [A]An electrode for an energy storage and conversion device, comprising

a substrate; and

a layer of an active material comprising a metal sulfide, metal selenide, or metal telluride, and having a thickness in the range from about 5 to about 114 microns deposited on the substrate, wherein the layer comprises greater than 95% of the active material.

22-23. (Cancelled)

24. (Original) The electrode of claim 21, wherein the active material is a metal sulfide.

25. (Previously Presented) The electrode of claim 21, wherein the active material is FeS_2, CoS_2, WS_2, NiS_2, or MoS_2.

26. (Currently amended) The ~~method~~electrode of claim 21, wherein the active material is FeS_2,.

27. (Previously Presented) The electrode of claim 21, wherein the active material is microstructured.

28. (Previously Presented) The electrode of claim 21, wherein the active material is nanostructured.

29-40. (Cancelled)

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41. (Previously Presented) An electrode for an energy storage and conversion device, comprising

a substrate; and

a layer of an active material comprising FeS_2, CoS_2, WS_2, NiS_2, MoS_2, metal selenide, or metal telluride, and having a thickness in the range from about 5 to about 114 microns deposited on the substrate, wherein the layer comprises greater than 95% of the active material.

42. (Previously Presented) The electrode of claim 41, wherein the active material is FeS_2.

43. (Previously Presented) The electrode of claim 41, wherein the active material is microstructured.

44. (Previously Presented) The electrode of claim 41, wherein the active material is nanostructured.

45. (Previously Presented) An electrode for an energy storage and conversion device, comprising

a substrate; and

a layer of an active material having a thickness in the range from about 5 to about 114 microns comprising a metal sulfide, metal selenide, or metal telluride deposited on the substrate by a thermal spray method comprising providing a feedstock mixture comprising an effective quantity of a source of elemental sulfur and a metal sulfide, an effective quantity of a source of elemental selenium and a metal selenide, or an effective quantity of a source of elemental tellurium and a metal telluride and thermally spraying the feedstock mixture onto the substrate.

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46. (Previously Presented) The electrode of claim 45, wherein the active material is a metal sulfide.

47. (Previously Presented) The electrode of claim 45, wherein the active material is FeS_2, CoS_2, WS_2, NiS_2, or MoS_2.

48. (Previously Presented) The electrode of claim 45, wherein the active material is microstructured.

49. (Previously Presented) The electrode of claim 45, wherein the active material is nanostructured.

50. (Previously Presented) An electrode produced by the process of:

thermally spraying a feedstock mixture onto a substrate to produce a film of an active material having a thickness of about 1 to about 1000 microns, wherein the feedstock material comprises an effective quantity of a source of elemental sulfur and a metal sulfide active material, an effective quantity of a source of elemental selenium and a metal selenide active material, or an effective quantity of a source of a elemental tellurium and a metal telluride active material.

51. (Previously Presented) The electrode of Claim 50, wherein the feedstock mixture comprises a source of elemental sulfur and metal sulfide.

52. (Previously Presented) The electrode of Claim 51, wherein the metal sulfide is FeS_2, CoS_2, WS_2, NiS_2, or MoS_2.

53. (Previously Presented) The electrode of Claim 50, wherein the active material is microstructured.

54. (Previously Presented) The electrode of Claim 50, wherein the active material is nanostructured.

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